

CLAIMS

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1. A polishing apparatus which imparts relative motion between a workpiece and a polishing tool to polish the surface of said workpiece by a polishing surface of said polishing tool, comprising:

a dressing tool for forming a surface roughness on the polishing surface of said polishing tool;

a first moving means for imparting relative motion between a grindstone and said polishing tool;

a second moving means for moving said dressing tool and/or said polishing tool in a direction vertical to the polishing surface of said polishing tool; and

a control means for permitting to execute movement caused by said first moving means while controlling a position of said second moving means.

2. The polishing apparatus according to claim 1, wherein said polishing tool is formed of abrasive grain and a material for joining and holding said abrasive grain.

3. The polishing apparatus according to claim 1, wherein said dressing tool includes a plurality of kinds of hard grain.

4. The polishing apparatus according to claim 3, wherein said hard grain is diamond.

5. The polishing apparatus according to claim 1,

Sub A 37

wherein said control means comprises a detection means for detecting contact of said polishing tool with said dressing tool and controls to stop said second moving means on the basis of the detection of contact between said polishing tool and said grindstone by said detection means.

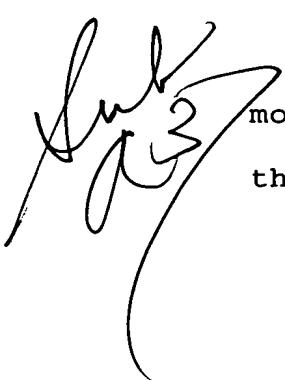
6. The polishing apparatus according to claim 1, wherein said first moving means moves said dressing tool, said polishing tool or both of them so that said dressing tool moves on said polishing tool.

7. The polishing apparatus according to claim 1, wherein said control means comprises a setting means for setting a cut-in amount of said dressing tool with respect to said polishing tool, and said second moving means moves in accordance with a value set by said setting means.

8. The polishing apparatus according to claim 7, wherein said control means realizes the cut-in amount set by said setting means by moving said second moving means plural times.

9. The polishing apparatus according to claim 8, wherein the cut-in amount by said setting means is set to be smaller than depth required to stick the hard grain contained in said dressing tool into said polishing tool.

10. A polishing apparatus which imparts relative motion between a workpiece and a polishing tool to polish the surface of said workpiece by the polishing surface of



said polishing tool, comprising:

a dressing tool for forming a surface roughness on the polishing surface of said polishing tool; and

a means for inhibiting movement of a grindstone in a direction vertical to the polishing surface of said polishing tool.

112 11. An apparatus for manufacturing a semiconductor for effecting polishing-processing while pressing the thin film surface adhered to the surface of a semiconductor substrate formed with an irregularity pattern to the polishing surface of a polishing tool for relative motion, characterized in that forming of a surface roughness by a dressing tool for forming the surface roughness on the polishing surface of said polishing tool is carried out, during a period between the polishing processings or during the polishing processing, while controlling movement of said dressing tool in a vertical direction with respect to said polishing surface.